

Focusing on the Fundamentals in Treating PTSD: An Innovative Approach

Evidence Based Care

The Quadruple Aim: Learning & Growth, Readiness, Experience of Care COL Carl Castro







Military Operational Medicine Research Program

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PTSD: Clinical Definition/ Diagnosis



- Complex disorder associated with significant co-morbidity, disability, and impairment of daily living following exposure to a traumatic event
- Diagnosis includes: (1) Event; (2) Reaction; (3)
 Symptoms; (4) Impairment; (5) Time course
- Symptoms fall into three clusters:
 - Intrusive recollection of event in some way
 - Avoidance of reminders of the event or numbing
 - Hyper-aroused state

Two Models of PTSD



Victim Model of PTSD

Traumatic Event

- (Unexpected)
- (Discrete)

Reaction

- Helplessness
- Horror
- Fear

Symptoms

- (Maladaptive)
- Re-experience
- Avoidance
- Arousal

Functional Impairment

- Social
- Work
- Other Relationships

Military Occupational Model of PTSD

Military Training/ Preparation Context/
Performance

Military Culture and Structure

Symptoms

- Adaptive
- •Maladaptive

Traumatic Event

- Expected
- Varied
- Multiple
 Events
- Repeated

Impacts the cognitive processing of the event(s)?

Reaction

- Training KicksIn
- "Autopilot"
- Adequate Performance

Symptoms Plus Others

- Grief
- Betrayal
- Second Guessing
- Risk Taking
- Dominating Symptom(s)
- (Moral Injury)

Masked Impairment

- Functioning Enabled
- Suffering while "functioning"

Source: Castro & Adler, in press

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PTSD Care Continuum Determines Research Approach

Continuing Education and Reinforcement for Soldiers, Leaders and Service Providers

Epidemiology / **Mechanisms Basic** Science / \$49M 56 Neurobiologica studies

•Training •Risk Screen

Combat/Trauma Stress/Trauma **Coping Skills**

Prevention, Education & Training

•Skills-based Strategies Stigma Reduction

•Self/Other Identification Protective &

Risk Factors

\$7M, 5 studies

Research **Stigma Highlights**

RESEARCH NEEDS

•In-theater **Debriefing** Decompression Identification &

Referral Screening

Exposure

Standard Clinical Assessments

•Imaging & **Biomarkers**

Differential **Diagnosis**

•Clinical Practice **Guidelines**

Effective **Medications**

Cognitive & **Behavioral**

Interventions

Recovery **Protocols**

Continuity of

Care Models

•RTD

Standards

Recovery

Early Screening/ Intervention

•Individual/

Screening

Group Format

Best Practices

Assessment

Assessment

Treatment

Behavioral

Medications

Cognitive &

Novel Treatment

•Medication/ **Therapy**

Stepped Care Models

Technology **Assisted**

Systems approaches

\$17M. 3 studies

Stepped Care Model

Assessments

Imaging

•Clinical

Biomarkers

 Validated **Protocol**

Approaches

•Tele-Health

\$ 74M. 49 studies

Virtual Reality

•Follow-up **Care Model**

Return to

Duty/MOS

Change/Dis

charge

Periodic

Rescreening

•Chronic & Refractory Care

Long-term Care/ **Followup**

•Evaluation/ Measurement

 Refractory care protocols

Systems based-

approaches

\$11M, 7 studies

Cognitive **Disclosure** \$50M. 38 studies

Differential **Diagnosis Tool**

SOLUTIONS

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Problem/Threats



- Veterans have poorer treatment response than survivors of other traumas
- Stigma prevents/impedes seeking care
- Current evidence-based psychotherapies are <50% effective and do not address comorbidities
- FDA approved PTSD medications (paroxetine and sertraline) are modestly effective (<40%)

Current PTSD Treatment



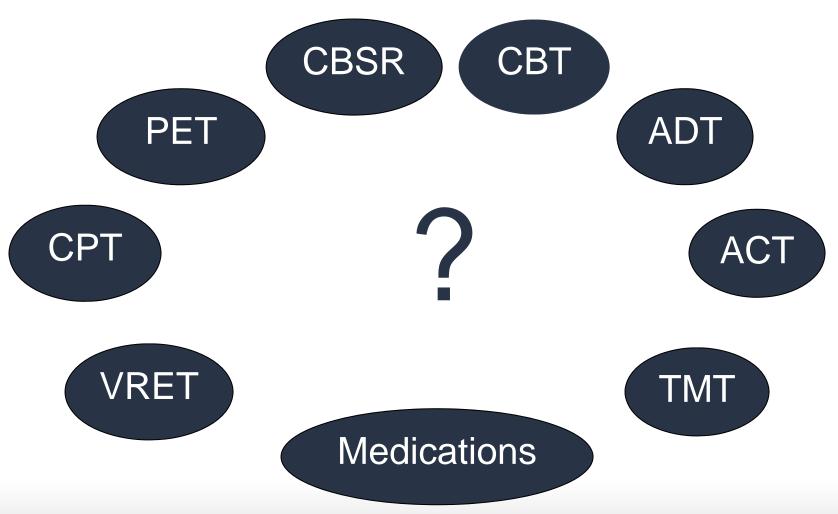
Existing processes insufficient to ensure use of evidence based clinical practice

- No accepted provider/treatment norms
- Provider selects treatment based upon:
 - Personal experience/comfort level
 - Artistry
 - Patient variables MAY be considered
- Eclectic-NOT manualized
 - Technique variations
 - Lacks empirical validation
 - Absence of progress standards

Current PTSD Treatments







Innovations



- Broad-spectrum approach to treatment
- Targeting multiple symptom groups
- Non-reductionistic (pharmacologic)
- Neurogenesis focus
- Evidenced Based, Manualized Treatment Protocols
 - PET
 - CPT
 - VRET

Prolonged Exposure Therapy (PET)



- Group or couples based:
 - PE delivered in a more compact/efficient format
 - Shortened Treatment Protocol
 - Massed versus Spaced
 - May improve treatment outcome
 - Strengthen soldiers' spouse/peer supportive relationships

Virtual Reality Enhanced PET



- Adds multi-sensory component to PET
- More effectively activates fear structures
- Better facilitates the necessary emotional engagement in treatment
- Computer-based administration facilitates
 - Primary care use or self-administration
 - Enhanced receptivity and adherence to treatment
 - Stigma reduction via at home treatment

Cognitive Processing Therapy (CPT)



- Group-based
 - More efficiency/great numbers treated
 - Potentially more effective with peer-group administration
 - More economical
- Individual-based Adaptive Disclosure Therapy
 - Combines imaginal exposure therapy with cognitive therapy to reframe/reinterpret disturbing combat/operational experiences

Psychopharmacology



- 2 FDA-approved medications for PTSD
- Current PTSD-drug RFP
- Research targeting specific neural circuitry for limited tailored relief:
 - Hydrocortisol, Propranolol, Prazosin,
 Nepicastat

 Proposed Neuro-cranial Stimulation Research

Summary/Conclusion



- In order to be innovative, you must understand the fundamentals
- Calling something innovative doesn't make it innovative
- Innovation can take many forms
- There are no short cuts
- Innovative ideas still must pass scientific and programmatic review

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